

# NEVADA STATE HEALTH DIVISION

## Oral Health Program



## Annual Report Program Year 2003-04 Executive Summary

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**Bureau of Family Health Services  
Nevada State Health Division  
Department of Human Resources**

Judith M. Wright, Bureau Chief

Kenny G. Guinn  
Governor

Alex Haartz, MPH  
Administrator

Michael J. Willden  
Director

Bradford Lee, MD  
State Health Officer

# **NEVADA STATE HEALTH DIVISION ORAL HEALTH CAPACITY BUILDING PROGRAM**

## **Annual Report: Program Year 2003-04 Executive Summary**

### **Introduction**

As Dr. C. Everett Koop stated during his term as U.S. Surgeon General, "You are not healthy without good oral health." Oral health problems can be extremely painful for all age groups, with the pain often leading to problems with eating, nutrition and sleeping.

Research has shown that a lack of proper dental care can also be directly linked to other poor health conditions. Minor infections and diseases of the gums and mouth can lead to serious infections and diseases of the mouth and gums which can spread to other parts of the body. The American Dental Hygienists' Association states that "poor oral health has been identified as a risk factor contributing to respiratory system (lung) diseases – chronic bronchitis, emphysema, and pneumonia." Preventive dental care can lead to better overall health status and well-being.

For children, the pain and infection caused by dental caries can lead to problems in speaking and attention in school. Other studies have shown that chronic dental problems in children can adversely affect self-image, school attendance, and school performance. Nationally, an estimated 50 million hours of school time are lost annually by children because of oral health problems.

Promoting good oral health among all Nevadans is clearly an important public health goal. The Nevada State Health Division has worked for many years toward this goal. In 1999, funding from the Maternal and Child Health Block Grant made it possible to establish a State Oral Health Initiative with a prevention and education focus. The Centers for Disease Control and Prevention (CDC) then awarded a five-year cooperative agreement in July 2001, enabling Nevada to expand these activities by establishing the State Oral Health Program (OHP) to work towards systematic enhancements in the planning and development of state, regional and local efforts to improve oral health in Nevada.

This executive summary provides highlights from an annual report that presents the most current data available about oral health conditions in the state and describes accomplishments of the OHP and many other partners working to improve oral health in Nevada, covering the fiscal year July 1, 2003 through June 30, 2004. The complete report is available online at <http://health2k.state.nv.us/oral>.

### **Overview of the State Oral Health Program**

The State Oral Health Program (OHP) is a statewide program under the Bureau of Family Health Services in the Nevada State Health Division. The mission of the OHP is to improve the oral health of Nevadans through education and prevention. This mission is pursued by fulfilling several key roles, which include:

- Sponsor research and analyze data to understand the magnitude of oral disease, populations affected by oral disease and unmet oral health needs;
- Develop a comprehensive statewide plan for addressing the unmet needs and improving oral health in Nevada;
- Promote partnerships at state, regional and local levels that bring together diverse groups toward the common goal of improving oral health;

- Identify opportunities to prevent oral disease and work to develop and support efforts to act upon these prevention opportunities;
- Support specific programs, such as application of dental sealants for school-age children and community water fluoridation, that are proven to have significant long-term positive effects on oral health; and
- Coordinate sharing of best practices and lessons learned, both within the state and with other states.

The staff of the OHP includes a State Dental Health Consultant, an Oral Health Program Manager, a Biostatistician, a Fluoridation Consultant, an Administrative Assistant, a Health Educator and a Sealant Coordinator. A 13-member Oral Health Advisory Committee (OHAC) provides advice and assists the OHP in developing, implementing and evaluating program activities. Members of the OHAC currently represent the State Board of Dental Examiners, Nevada Dental Association, Nevada Dental Hygienists' Association, University of Nevada Las Vegas, School of Dental Medicine, Miles for Smiles, the Take Care-A-Van, the Washoe and Clark County Health Departments, tribal health centers, seniors, the developmentally disabled and the faith-based communities.

Supporting optimal oral health is a complex effort involving many partners. There are currently six coalitions or variations on coalitions in Nevada with a primary focus on oral health. They include the OHAC (statewide), the Northern Nevada Dental Coalition for Underserved Populations (Washoe County), Lyon County Healthy Smiles, Inc. (Lyon County), the Elko Oral Health Coalition (Elko County), the Community Coalition for Oral Health (Clark County) and the Tooth Fairy Council (children's oral health in Clark County). Each group shares activities and information with the other groups. The OHP provides assistance by facilitating communication and collaboration between them.

2003-04 was a year of exceptional accomplishment for the State Oral Health Program (OHP) and many other organizations around the state working to improve oral health in Nevada. An independent evaluation of the OHP found that all of the annual objectives set for the OHP were fully met or exceeded.

However, the magnitude of the state's oral health needs must not be underestimated. Nevada's population has doubled in the last 15 years, with major changes in the ethnic and age composition of the state's residents also occurring since 1990. It has only been during the past five years of this period of rapid growth that oral health has received attention as an important public health issue in Nevada.

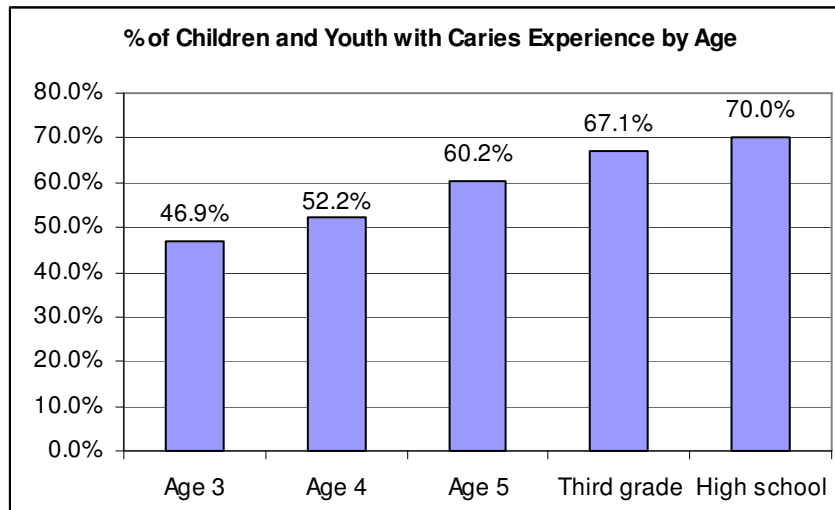
The result is a situation where the last five years were needed to build the type of statewide capacity – the leadership, services, partnerships and other infrastructure – necessary to impact oral health conditions in the state. A solid foundation has now been laid that can make a measurable difference in improving oral health if it can be sustained and further strengthened in the years to come.

## **Current Status of Oral Health in Nevada**

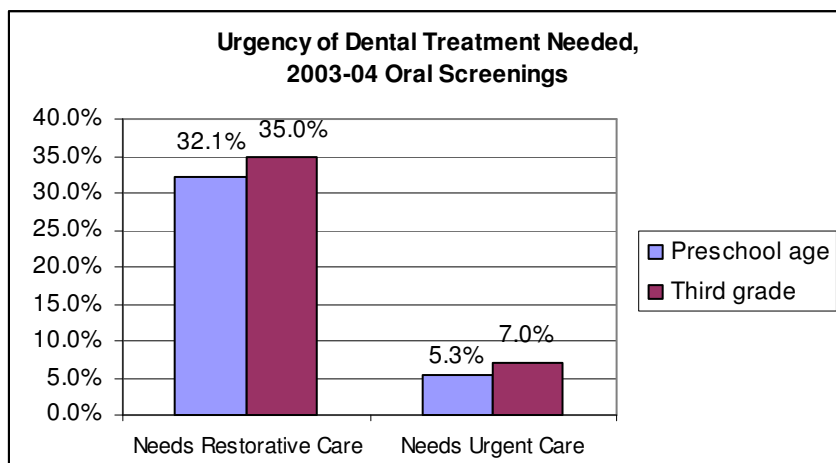
The main forms of oral disease requiring attention as public health issues are dental caries (cavities) affecting teeth, periodontal (gum) diseases affecting the gums and bone supporting the teeth, and oral cancers.

Dental caries begin at a young age and accumulate throughout life, underscoring the importance of starting efforts early in childhood to prevent caries. According to *Oral Health in America: A Report of the Surgeon General*, tooth decay is the single most common chronic childhood disease.

In Nevada, recent data shows that by age five, over 60 percent of children participating in the Head Start program had already developed one or more cavities. By third grade, over 67 percent of children had caries experience. The chart to the right shows the progression of caries experience among different age groups that have been screened in Nevada for dental issues within the past two years.



Of significant concern is that many children with tooth decay have not received treatment for the decay. Left untreated, the decay often worsens to the point of creating chronic pain, swollen or bleeding gums and other conditions. The 2004 oral screening of children age three to five in Nevada's Head Start

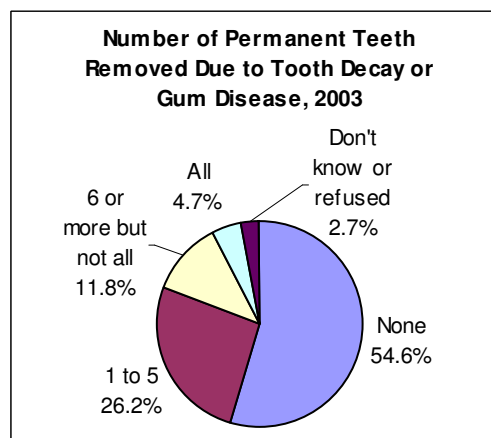


programs found 37.5 percent with untreated dental decay, of which 5.3 percent were in need of urgent care due to problems such as current pain and/or infection. A 2003 screening of third grade children across all economic groups found even higher rates; 39.0 percent of children had visible untreated dental decay and 7.0 percent needed urgent care. Among adolescents, a 2004 screening of almost 12,000 high school students found untreated

decay in 31.7% of students.

Over time, tooth decay often leads to more serious oral health conditions. One indicator of more serious conditions is the loss of teeth as a result of tooth decay or periodontal (gum) diseases. The 2004 screening of high school students showed over 15 percent of students with missing teeth. Among adults of all ages surveyed in 2003, 45.5 percent reported having at least one tooth removed due to tooth decay or gum disease. Highlighting the potential severity of chronic oral disease, 16.5 percent of adults indicated they have lost six or more teeth due to tooth decay or gum disease.

Seniors are particularly hard hit by oral health problems. The most recent detailed study of the oral health of



seniors, conducted by Cristman Associates in 1999, found that among seniors living in long-term care facilities:

- 24% were experiencing chewing problems
- 14% had teeth that were broken, loose or with visible untreated caries
- 8% had current mouth pain
- 6% had inflamed gums (gingiva), swollen gums or bleeding gums
- 23% had lost some natural teeth but did not have dentures or a partial plate
- 6% had lost all of their natural teeth but did not have dentures
- 3% had oral infections, ulcers or rashes

The most serious of oral diseases is oral cancer, consisting of cancers of the lip, oral cavity and pharynx. Nevada recorded 210 cases of oral cancer in 2000. The five-year survival rate for Nevadans with oral cancer is 31 percent. Between 1996 and 2000, there were 213 deaths from oral cancer in the state.

While mortality from oral cancer typically does not occur until age 45 or later, the seeds are often planted in the adolescent years. As an indicator of this, the open mouth screenings of high school students performed by Crackdown on Cancer include a search for abnormal, soft tissue lesions that may become cancerous. A total of 131 lesions were found during the 2003-04 academic year screenings. For each lesion, a rating of suspicion (indication that lesion may become cancerous) between 1 and 10, with 10 being the most suspicious, was assigned. A high 33.7 percent of the lesions had ratings between 6 and 10.

The most effective means of reducing the prevalence and severity of oral health problems are public education about proper dental care starting from birth, access to regular visits to a dentist, and preventive measures, especially placement of dental sealants on permanent molars at an early age and fluoridation of community water sources. There is room for substantial improvement in Nevada with respect to these important determinants of oral health, as evidenced by the following findings from recent research:

- ❖ Of the preschool age children screened in 2004, 14.8 percent had never been to the dentist. The average number of decayed teeth among children with a lack of access to dental care was 2.5 times the average number for children who obtained service. Among third grade children screened in 2003, 11.2 percent had never been to a dentist and another 5.2 percent had not seen a dentist for over three years. Among adults, 11.3 percent of respondents to the 2003 Behavioral Risk Factor Surveillance System survey had either not visited a dentist for over five years or had never been to a dentist.
- ❖ Access to a dentist is directly linked to whether a person or family has dental insurance. Of the parents in the 2004 study of preschool age children in the Head Start program, 35.3 percent reported that they do not have dental insurance. Of third grade children in the 2003 study, 27.4 percent are not covered by dental insurance.
- ❖ As of 2003, 33.2 percent of third grade children had dental sealants placed on at least one permanent molar, well under the Healthy People 2010 goal of 50 percent.
- ❖ Of the population in Nevada served by community water systems, 69 percent receives fluoridated water, compared to the Healthy People 2010 target of 75 percent.

## **2003-04 Accomplishments to Improve Oral Health**

The OHP is focused on achieving ten capacity building goals, creating a strong statewide infrastructure to carry out oral health prevention and education activities. Each year, specific objectives are set that describe what the OHP seeks to accomplish during that year toward achieving the longer-term goals.

All of the annual objectives set for the OHP in fiscal year 2003-04 were fully achieved or exceeded. The following chart summarizes the achievements for the year, linked to the ten longer-term goals.

Goal	2003-04 Accomplishments
1. Maintain Oral Health Program leadership capacity	<ul style="list-style-type: none"> <li>✓ Contracted with R. Michael Sanders, DMD, EdM, for the position of State Dental Health Consultant</li> <li>✓ Met all other targeted staffing and resource levels set for the OHP for the year</li> <li>✓ Surveyed oral health leaders statewide regarding the extent to which Nevada has a strong statewide oral health infrastructure, providing guidance about areas where leadership capacity can be further strengthened</li> </ul>
2. Describe the oral health disease burden, health disparities and unmet needs in the state	<ul style="list-style-type: none"> <li>✓ Issued the annual oral health burden document in December 2003 and distributed it to over 130 stakeholders statewide</li> <li>✓ Issued a brief questionnaire to recipients to obtain feedback on ways to make future improvements to the burden document</li> </ul>
3. Update a comprehensive five-year State Oral Health Plan	<ul style="list-style-type: none"> <li>✓ Held a statewide Oral Health Summit in January 2004 to engage all oral health coalitions in the state and other stakeholders in planning future improvements to oral health infrastructure</li> <li>✓ Developed and published the 2004 State Oral Health Plan</li> <li>✓ Issued a brief questionnaire to recipients to obtain feedback on ways to make future improvements to the Oral Health Plan</li> </ul>
4. Sustain a diverse statewide oral health coalition to assist in formulation of plans, guide project activities, and identify additional financial resources	<ul style="list-style-type: none"> <li>✓ Provided support to five regional coalitions in Nevada with a primary focus on oral health</li> <li>✓ Convened the State Oral Health Advisory Committee quarterly to connect all of the regional coalitions together and assist with state-level planning and development activities</li> <li>✓ Conducted an assessment with local coalition members to help strengthen overall functioning and clarify future priorities</li> </ul>
5. Enhance the oral disease surveillance system by continuing to collect, analyze, and disseminate data to support program activity	<ul style="list-style-type: none"> <li>✓ Conducted a statewide oral screening of over 1,700 Head Start children age five and under and issued a report of study results</li> <li>✓ Collected and analyzed data from the Behavioral Risk Factor Surveillance System on adult access to dental care and tooth loss</li> <li>✓ Obtained and analyzed data from all school-based dental sealant programs in the state</li> <li>✓ Monitored water fluoridation consistent with the national Water Fluoridation Reporting System standards</li> <li>✓ Analyzed data collected by Crackdown on Cancer from oral screenings conducted for 11,787 high school students statewide during the 2003-04 academic year</li> </ul>
6. Identify prevention opportunities for systematic, socio-political, and/or policy change to improve oral health	<ul style="list-style-type: none"> <li>✓ Conducted an environmental assessment to identify areas in which policy change could potentially improve oral health</li> <li>✓ Developed fact sheets on dental sealants and water fluoridation to use in educating policy makers and the public</li> <li>✓ Sought additional funding for school based sealant programs</li> </ul>

Goal	2003-04 Accomplishments
6. Identify prevention opportunities (continued)	<ul style="list-style-type: none"> <li>✓ Assisted the Community Coalition for Oral Health in Clark County with policy papers on oral health access/infrastructure, early childhood oral health needs, oral health care for older adults, water fluoridation, sealants and the dental workforce</li> <li>✓ Bringing to fruition policy changes sought for several years, state law was amended to allow dental hygienists in public health settings to determine the suitability of teeth for dental sealants, to allow a dentist to authorize a dental hygienist to supervise a dental assistant, and to allow a dental hygienist with a Public Health Endorsement from the State Board of Dental Examiners to supervise a dental assistant in public health settings</li> </ul>
7. Develop and coordinate partnerships to increase state level and community capacity to address specific oral disease prevention interventions	<ul style="list-style-type: none"> <li>✓ Obtained information from oral health programs around the state to understand accomplishments, challenges and potential future partnership opportunities</li> <li>✓ Partnered with the Nevada Broadcasters Association in an oral health education media campaign; a total of 14,129 radio and TV spots with a value of \$1,508,950 were aired over 11 months</li> <li>✓ Presented the Healthy Smile-Happy Child Early Childhood Caries prevention class 13 times to 126 participants.</li> <li>✓ Conducted Prevent Abuse and Neglect through Dental Awareness (P.A.N.D.A.) training 39 times to 461 participants</li> <li>✓ Assisted with creating the "1 Day" program, a collaboration in southern Nevada where dentists are providing free care to uninsured children referred by local agencies</li> <li>✓ Worked with the Department of Education to integrate oral health education into the school curriculum</li> <li>✓ Provided funding to Health Access Washoe (HAWC) County for an Early Childhood Caries (ECC) prevention project focusing on pregnant women and very young children</li> <li>✓ Served on seven state and national boards and advisory committees to promote oral health and link oral health issues to health care and child care programs</li> </ul>
8. Coordinate and implement a limited community water fluoridation program	<ul style="list-style-type: none"> <li>✓ In cooperation with the Bureau of Health Protection Services, developed and implemented a comprehensive fluoride inspection program according to the standards set by the national Engineering and Administrative Recommendations for Water Fluoridation (EARWF)</li> <li>✓ Conducted inspections of Las Vegas Valley Water Authority and the City of Henderson fluoridation equipment and tracked results of daily testing of fluoridation levels</li> <li>✓ Sponsored fluoridation training for a water plant operator for each of the two water authorities that fluoridates</li> <li>✓ Initiated a study of naturally occurring fluoride levels</li> </ul>
9. Evaluate, document & share state program accomplishments, best practices, lessons learned, and use of evaluation results	<ul style="list-style-type: none"> <li>✓ Developed and implemented a process to conduct an annual evaluation of the OHP, resulting in this annual report</li> <li>✓ Presented program accomplishments quarterly to the State Oral Health Advisory Committee and at four national conferences</li> </ul>

Goal	2003-04 Accomplishments
10. Assist the development, coordination, and implementation of limited school-based or school-linked dental sealant programs	<ul style="list-style-type: none"> <li>✓ Participated actively in partnership for school-based sealant programs; in the 2003-04 school year, sealant programs were operating at 62 schools and 1,531 second-grade students had an oral screening and sealants placed through these programs</li> <li>✓ Assisted the school-based sealant programs by helping to locate volunteer dentists to provide screenings prior to sealant placement, locating volunteer dental hygienists to provide screening and sealant placement, obtaining free dental sealant material, providing four sets of dental equipment to utilize in the sealant program, and collecting and analyzing reports from the dental sealant program partners</li> <li>✓ Developed a resource list showing where children needing restorative services can receive services</li> </ul>

In addition to the ten goals that were the focus of OHP efforts, numerous organizations around the state were working in 2003-04 to provide oral health education, prevention and treatment services. Twenty-nine local, regional and statewide programs are in operation, reaching underserved populations in almost every area of the state with some level of services related to oral health.

This report focuses on public health efforts to prevent oral disease, and does not cover private dental services or issues such as whether there are an adequate number of dentist and dental hygienists in Nevada. However, the active participation of hundreds of dentists and dental hygienists around the state in projects to improve oral health must be gratefully acknowledged. The donation of time and resources by these professionals is crucial to the success of the oral health coalitions, school-based sealant programs and many of the other initiatives described in this report.

## Recommendations

Following is a summary of the most important recommendations emerging from the 2003-04 evaluation.

1. **Diversify, expand and sustain funding.** The OHP should have a major role in future capacity building for oral health prevention and education because it has demonstrated that it is accountable to its goals, effective in developing partnerships and supporting coalitions around the state, and able to accomplish much with limited resources. However, this cannot happen over the long run without more diversified funding, as 100 percent of OHP funding currently comes from time-limited federal grants. Additional resources are also needed to support the dental coalitions around the state, school-based dental sealant programs and other valuable prevention efforts.
2. **Address data gaps.** Several opportunities exist to fill gaps in data that are critical for planning and decision-making. These include better information to align program capacity with priority population needs, better data on oral health needs of adolescents and adults, data to assess the prevalence of periodontal disease and the percent of population receiving preventive services, and consistency in data collection methods to enable trends to be analyzed over time.
3. **Sustain the emphasis on collaboration.** Progress has been accelerated when partners from around the state have been able to work together in a coordinated manner on oral health improvements. Ways in which collaboration can be aided in the future include holding another State Oral Health Summit in 2005 to bring partners together, provide a Coalition Coordinator to support the local coalitions and help them work together across regions, and creating regional plans to further clarify the roles of the local coalitions in carrying out the strategies described in the State Oral Health Plan.



4. **Further enhance the evaluation process.** Opportunities to build upon the 2003-04 evaluation of the OHP include creating a thorough evaluation plan for 2004-05, identifying more best practices from other states that can be considered for use in Nevada, and assessing local oral health leadership capacity in order to identify ways to strengthen leadership at all levels (local, regional and state).

## **Conclusion**

The current picture is one of both great need and substantial hope. Oral disease is hurting the health and well being of large percentages of our residents at all age levels, yet there is hope for the future because of the major advances made in recent years in oral health infrastructure and collaboration. The key is sustaining the commitment to oral health through continued investments in education, prevention, and a strong state support system.